ACCESSION NR: AP4043611 S/0056/64/047/002/0419/0432

AUTHORS: Flerov, G. N.; Karnaukhov, V.A.; Ter-Akop'yan, G. M.; Petrov, L. A.; Subbotin, V. G.

TITLE: On proton decay of radioactive nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 419-432

TOPIC TAGS: radioactive decay, proton decay, proton radiation, heavy particle, Coulomb repulsion force, alpha particle reaction

ABSTRACT: This paper is an elaboration of a previous report (ZhETF v. 45, 1280, 1963) and contains additional new data on observed proton emitters. Experiments on proton decay of radioactive nuclei, using the internal beam of the heavy-ion cyclotron of OIYaI, are described and data are presented on two types of proton emitters obtained by bombarding nickel with beams of Ne^{20} and O^{16}. The first (one of the light isotopes of neon or magnesium) has a half-life

Card 1/5

ACCESSION NR: AP4043611

$(85 \pm 15) \times 10^{-3}$ sec and emits protons with energy 5 ± 0.2 MeV. The second has a half-life 23 ± 4 sec and emits protons with energy 2.5 ± 0.2 MeV. It is concluded on the basis of several experiments that the second emitter is one of the light isotopes of Kr or Br, so that sub-barrier protons are emitted (height of the Coulomb barrier is ~8.5 MeV). It is most probable that the protons are emitted from the daughter nucleus following the positron transition with which the measured half-life is connected. The emission of ~5 MeV protons is similar to the emission of delayed neutrons. The emission of 2.5-MeV sub-barrier protons is analogous to the emission of long-range alpha particles by heavy nuclei. It is also shown that in the case of the ≈2.5-MeV proton emitter another possible mechanism is proton decay of configuration isomers. Further work is planned for an experimental determination of the mechanism of the observed proton decay and for a more exact identification of the obtained protons. "The authors are grateful to E. Z. Ry*ndina and her co-workers for much preparing the silicon detectors, which were

Card 2/5

ACCESSION NR: AP4043611

essentially in the present work. The authors thank V. Titov and V. Chugreyev for construction work, Ye. A. Minin, N. Danilov, and B. Bichev for help in preparation for the experiments, and the cyclotron crew headed by A. N. Filipson for the irradiation." Orig. art. has: 11 figures and 2 tables.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 26Feb64 ENCL: 02

SUB CODE: NP NR REF SOV: 013 OTHER: 013

Card 3/5

ACCESSION NR: AP4043611

ENCLOSURE: 01

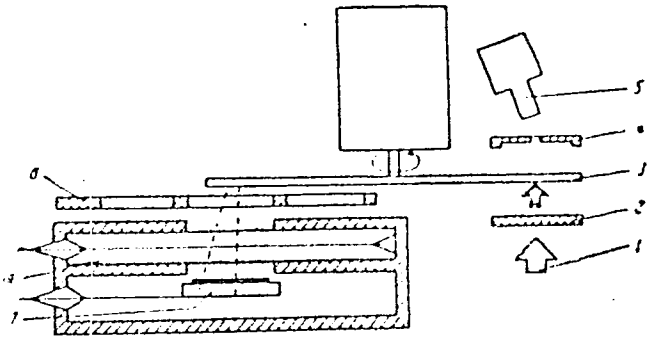
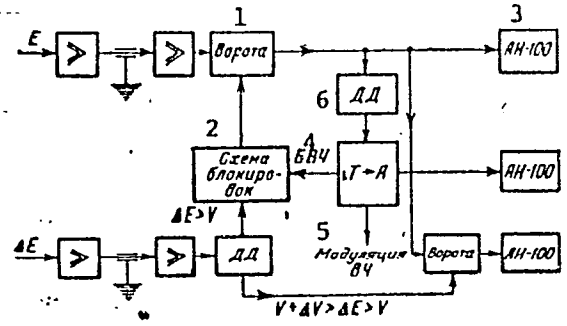


Diagram of experimental set-up
1 - ion beam, 2 - target, 3 - collector, for reaction products, 4 - ion collector, 5 - detector, 6 - proportional counter, 7 - surface barrier detector, 8 - moving frame

Card 4/5

ACCESSION NR: AP4043611 ENCLOSURE: 02



Block diagram of electronic apparatus
1 - gates, 2 - blocking circuits 3 - pulse analyzer 4 - high frequency block, 5 - high frequency modulation, 6 - discriminator (differential)

Card 5/5

L 13497-65 EWT(m) AFWL/SSD

ACCESSION NR: AP4047894 S/0056/64/047/004/1270/1272

AUTHORS: Karnaukhov, V. A.; Lu, Hsi-t'ing

TITLE: Concerning an experimental attempt to observe two-proton decay of Ne-16

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 4, 1964, 1270-1272

TOPIC TAGS: neon, proton reaction, two proton decay

ABSTRACT: The experimental search for the two-proton radioactivity was carried out by bombarding a nickel target with ~150 MeV Ne^{20} ions (reaction $Ne^{20} + Ne^{20} + Ni^{A} \rightarrow Ne^{16} + Ni^{A+4}$) in the internal beam of the OIYaI 300 cm cyclotron. The experimental setup is shown in Fig. 1 of the enclosure, which shows also the theoretical trajectories of Ne^{20} and Ne^{16} (the magnetic field is perpendicular to the plane of the figure). A special emulsion method was used to record

Card 1/3

L 13497-65
ACCESSION NR: AP4047894

the Ne^{16} produced in the four-neutron-transfer reaction. Not a single case of two-proton decay was observed. The following explanations of the results are possible: 1) the cross section for the production of Ne^{16} is $\sim 1.8 \times 10^{-30}$ cm^2 (provided the decay energy is $E_{pp} > 1$ MeV and the lifetime is not smaller than 10^{-8} sec), 2) the lifetime of Ne^{16} is smaller than 10^{-8} sec. "In conclusion the authors thank Professor G. N. Flerov for interest in the work and V. P. Perely*gin and S. P. Tret'yakova for help with the work with the photoemulsions." Orig. art. has: 1 figure.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 15May64 ENCL: 01

SUB CODE: NP NR REF SOV: 005 OTHER: 004

Card 2/3

L 13497-65

ACCESSION NR: AP4047894

ENCLOSURE: 01

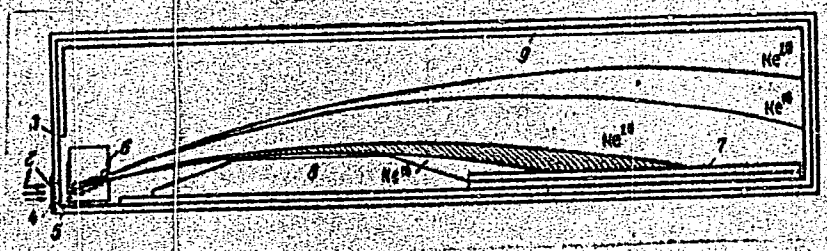


Fig. 1. Experimental setup. 1 - Ion beam, 2 - aluminum foil, 3 - copper jacket, 4 - jacket window, 5 - target, 6- collimator, 7 - photographic plate, 8 - copper screen, 9 - lead lining

Card 3/3

L 41004-65 EWT(m) Peb DIAAP

ACCESSION NR: AP5007706 S/0367/65/001/001/0061/0066

AUTHOR: Karnaukhov, V. A.; Ter-Akop'yan, G. M.

TITLE: The proton decay of nuclei with Z > 50

SOURCE: Yadernaya fizika, v. 1, no. 1, 1965, 61-66

TOPIC TAGS: nuclear proton decay, neutron deficient nucleus, Alpha decay, Beta decay, nucleon ion interaction

ABSTRACT: The often discussed possibility of proton decay for nuclei with Z >50 is considered theoretically in detail forthe case of neutron deficient nuclei. It is shown that this type of radioactive transition including both the emission of delayed protons and proton decay from the ground state must be a very common effect among neutron-deficient isotopes of all elements up to Be. An appreciable α-decay competition can only become apparent for nuclei with a number of protons or neutrons somewhat larger than the magic numbers 50 and 82. For elements with odd Z which are heavier than Sn, the authors were consistently able to find from two to four isotopes which were unstable with respect to proton emission from the ground state and had a measurable lifetime ($T_p \sim 10^{-1}$ to 10^{-11} sec). Most of

Card 1/2

L 41004-65
ACCESSION NR: AP5007706

2

these isotopes can be obtained after $\beta+$-decay of parent nuclei with even Z produced during reactions of nucleons with heavy ions. "The authors thank Prof. G. N. Flerov for deep interest and useful discussions." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Studies)

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: NP

NO REF SOV: 007 OTHER: 004

Card 2/2

L 57124-65 EWT(m)/EWP(t)/EWP(b) Peb DIAAP/IJP(c) JD
ACCESSION NR: AP5014316 UR/0367/65/001/005/0812/0815

AUTHOR: Karnaukhov, V. A.; Ter-Akop'yan, G. M.; Petrov, L. A.; Subbotin, V. G.

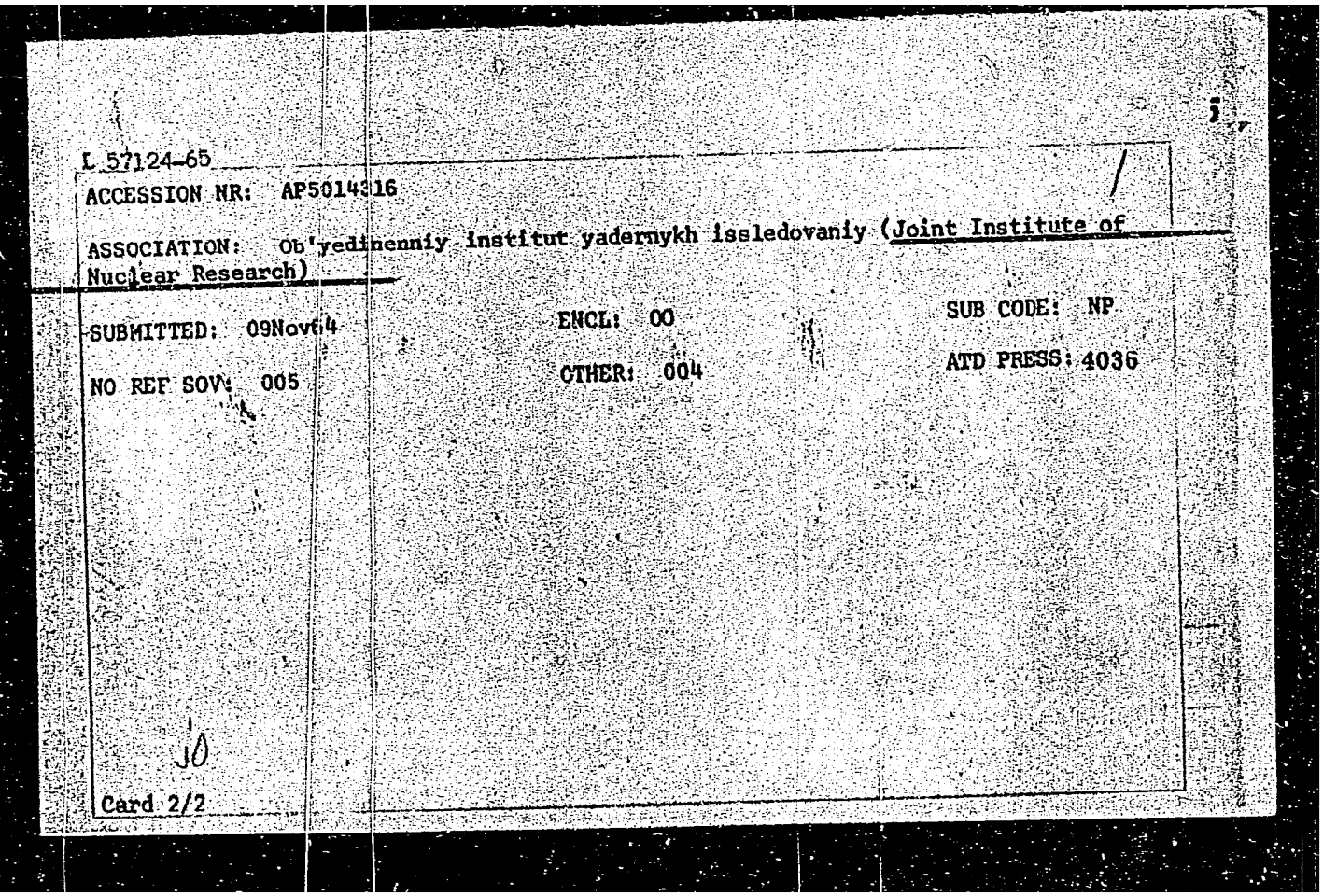
TITLE: Product of the Ru + O^{16} reaction as a proton emitter

SOURCE: Yadernaya fizika, v. 1, no. 5, 1965, 812-815

TOPIC TAGS: proton radiation, half life, nuclear reaction, emitter, radioactive decay

ABSTRACT: 70-90 Mev O^{16} ions were used to irradiate an Ru target. Two proton emitters with half lives 60 ± 10 sec and 11 ± 2 sec were observed among the reaction products. The proton energy spectrum consisted of a number of lines in the 2—4.5 Mev energy range, but it was not possible to separate these lines. Preliminary analysis indicates that it is highly probable that the 11 sec emitter is one of the isotopes of Te with a mass number 109 or 111. The experiment was conducted on the 310 cm cyclotron of the OIYaI. Graphs are given showing the decay of the two proton emitters. "The authors express their deep appreciation to Prof. G. N. Flerov for his helpful comments and continued interest in the work." Orig. art. has: 3 figures. [14]

Card 1/2



L 57124-65

ACCESSION NR: AP5014316

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 09Nov64 ENCL: 00 SUB CODE: NP

NO REF SOV: 005 OTHER: 004 ATD PRESS: 4036

Card 2/2

L 9462-66 FBD/EWT(l)/EWT(m)/EEC(k)-2/T/EWP(k)/EWA(h)/EWP(b)/EWA(m)-2/EWP(t)
ACC NR: AP5027431 SCTB/IJP(c) WG/JD SOURCE CODE: UR/0181/65/007/011/3421/3422

AUTHOR: Kryukova, I. V.; Karnaukhov, V. G.; Paduchikh, L. I. 44 44 44

ORG: none

70
B

TITLE: Stimulated emission from diffused gallium antimonide p-n junctions 27 27

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3421-3422

TOPIC TAGS: gallium antimonide, pn junction, stimulated emission, laser, semiconductor laser, junction laser 25,44

ABSTRACT: Stimulated emission was obtained at liquid nitrogen temperature in diffused GaSb p-n junctions. The diodes were fabricated by diffusing zinc from the gas phase into n-type wafers of GaSb grown by the Czochralski method. The Fabry-Perot cavity of the 0.4 x 0.4 x 0.4 mm diode was formed by cleaving. Carrier concentration and mobility of the samples were 2.9×10^{17} cm^{-3} and 3200 cm^2/v·sec, respectively. The spectrum of recombination radiation at various current densities (j) is shown in Fig. 1. Fig. 2 shows the narrowing observed at the threshold for the onset of stimulated emission at $j = 3—5 \times 10^4$ amp/cm^2. The maximum narrowing of the line (half-width of 0.006 ev) was achieved at $j = 5.4 \times 10^4$ amp/cm^2 and was limited by the width

Card 1/3

L 9462-66
ACC NR: AP5027431

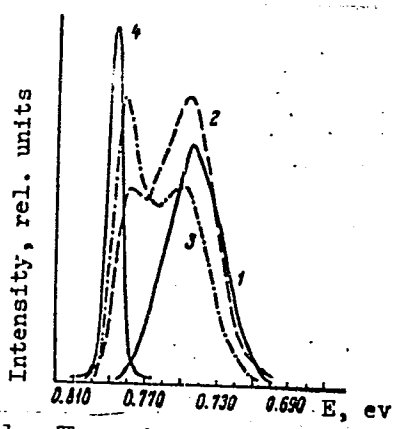


Fig. 1. The emission spectrum of Ga at 77K for the following current densities:

1 - 1.0 x 10^4; 2 - 2.2 x 10^4;
3 - 1.8 x 10^4; 4 - 4.5 x 10^4 amp/cm^2
(E_{max} = 0.790 ev).

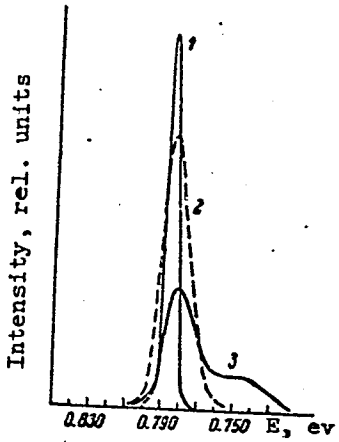


Fig. 2. Narrowing of the spectral line at the onset of stimulated emission at 77K and at the current densities of:

1 - 5.4 x 10^4; 2 - 3.1 x 10^4;
3 - 1.0 x 10^4 amp/cm^2.

Card 2/3

L 9462-66

ACC NR: AP5027431

of the slit of the monochromator. The intensity of the line was not proportional to j. The laser action was attributed to interband transitions. Orig. art. has: 2 figures.

[CS]

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ATD PRESS: 4155

jw
Card 3/3

KARNAUKHOV, V. G. [Karnaukhov, V. H.] (Kiyev)

Stress concentration around a circular hole in which is soldered a spherical anisotropic washer. Prykl. mekh. 8 no.6:679-682 '62. (MIRA 15:10)

1. Institut mekhaniki AN UkrSSR.

(Elastic plates and shells)

L 10527-63 EWP(r)/EWT(m)/BDS--AFFTC/APGC--EM

ACCESSION NR: AP3000454 S/0198/63/009/003/0259/0263

54

AUTHOR: Karnaukhov, V. G. (Kiev) 53

TITLE: Analytical solutions of problems of free vibration and stability of a conical shell

SOURCE: Prykladna mekhanika, v. 9, no. 3, 1963, 259-263

TOPIC TAGS: conical shell, conical shell stability, conical shell vibration

ABSTRACT: On the basis of simplified Mushtari-Donnell-Vlasov stress-strain equations, the author established exact theoretical solutions in the analysis of the free vibration and constructional stability of cylindrical conical shells under combined axial compression and external normal pressure. Solutions are made within the framework of the simplified membrane theory of thin shells by disregarding in flexural-strain expressions the terms depending on tangential components of the displacement vector. In solving the vibrational problem, only the normal displacements and inertia forces of the middle surface of the shell are considered; in analyzing the stability behavior, the symmetrical membrane-

Card 1/2

L 10527-63
ACCESSION NR: AP3000454

stress state of the shell is taken as the initial one. In both problems, by applying the associated boundary conditions, a determinantal equation is obtained for evaluating the natural frequencies and their corresponding modes, stresses, and critical loading. For practical calculations the method of successive approximations can be used, taking as the first approximation the value obtained by the variational method. Orig. art. has: 27 formulas.

ASSOCIATION: Insty*tut mekhaniky* AN URSR (Institute of Mechanics, AN URSR)

SUBMITTED: 30Dec62 DATE ACQ: 19Jun63 ENCL: 00

SUB CODE: AP NO REF SOV: 004 OTHER: 000

mcs/CA
Card 2/2

ACCESSION NR: AP4023363 S/0198/64/010/002/0131/0142

AUTHOR: Karnaukhov, V. G. (Kiev)

TITLE: Axially symmetric vibrations of a conic shell

SOURCE: Prykladna mekhanika, v. 10, no. 2, 1964, 131-142

TOPIC TAGS: conic shell axially symmetric vibrations, differential equation generalized power series precise solution, isotropic conic shell, orthotropic conic shell, differential equation non-logarithmic solution, differential equation logarithmic solution, differential equation asymptotic solution, Bubnov-Galerkin method

ABSTRACT: A precise solution is obtained in a generalized power series for differential equations describing free vibrations of an orthotropic and, as a special case, istropic conic shell of constant thickness. Using equations of motion, elasticity relations, and relations between deformations and displacements, and separating the variables, the problem of axially symetric vibrations of an isotropic conic shell can be expressed by the following system of differential equations:

Card 1/3

$$x^3\frac{d^2u}{dx^2}+x\frac{du}{dx}-\left[\frac{\nu_2}{\nu_1}cK_1x^3\right]u+\nu_2cx\frac{dw}{dx}-\frac{\nu_2}{\nu_1}cw=0,$$

$$x^4\frac{d^4w}{dx^4}+2x^3\frac{d^3w}{dx^3}-\frac{\nu_2}{\nu_1}x^3\frac{d^2w}{dx^2}+\frac{\nu_2}{\nu_1}x\frac{dw}{dx}+ \quad (1)$$

$$+\left[\frac{\nu_2}{\nu_1}cBx^2-K_2Bx^4\right]w+\nu_2Bx^3\frac{du}{dx}+\frac{\nu_2}{\nu_1}Bx^2u=0,$$

$$x^2\frac{d^2v}{dx^2}+x\frac{dv}{dx}+\left[\frac{L\varrho p^2}{G_{12}}x^2-1\right]v=0. \quad (2)$$

where u and v are the tangential components and w is the normal component of the displacement vector; and

$$x = \frac{l}{L}, \quad K_1 = \frac{\rho^2 Q (1 - \nu_1 \nu_2) L^2}{E_1 \operatorname{ctg} \alpha}, \quad K_2 = \frac{\rho^2 Q (1 - \nu_1 \nu_2) L^2}{E_2 \operatorname{ctg} \alpha}, \qquad (3)$$

$$B = 12 \operatorname{ctg} \alpha \frac{L^2}{h^2}, \quad c = \operatorname{ctg} \alpha.$$

In equation (3) h is the thickness of the shell; E_1, E_2 are the torsion modules in the direction of the meridian and in the circular direction; ν_1 and ν_2 are Poisson coefficients; G_{12} is the displacement module; Q is the density of the material, L is the length of the closed shell; α is angle between generating line and the axis of the cone; l is distance along the generating line from the top of the cone to the center of the surface; r_1 is the minimum radius; r_2 is the maximum radius; and p is the circular frequency of the vibrations.

The differential equation (2), which describes axially-symetric twisting vibrations, has the solution;

$$v = C_1 J_1\left(Lp\sqrt{\frac{Q}{G_{12}}}x\right) + C_2 Y_1\left(Lp\sqrt{\frac{Q}{G_{12}}}x\right).$$

Card 3/13

where J_1 is a first order cylindrical function and Y_1 is a first order cylindrical function of a different type.

The solution of equation (1) is first obtained for the case of an orthotropic shell:

$$u_l = x^{m_l}\sum_{n=0}^{\infty} a_{2n}^{(l)}x^{2n}, \quad w_l = x^{m_l}\sum_{n=0}^{\infty} b_{2n}^{(l)}x^{2n} \quad (l = 1, 2, 3, 4, 5, 6), \tag{4}$$

where

$$m_1 = 2, \quad m_2 = 0, \quad m_3 = 1 + \sqrt{\frac{\nu_2}{\nu_1}}, \tag{5}$$

$$m_4 = \sqrt{\frac{\nu_2}{\nu_1}}, \quad m_5 = 1 - \sqrt{\frac{\nu_2}{\nu_1}}, \quad m_6 = -\sqrt{\frac{\nu_2}{\nu_1}},$$

and the coefficients $a_{2n}^{(l)}$, $b_{2n}^{(l)}$ are determined from the recusion relations:

Card 4/13

$$b_{2n}^{(l)} = -\frac{1}{\varphi_{02}(m_l+2n)}\left[f_{22}(m_l+2n-2)\,a_{2n-2}^{(l)} + \right.$$

$$\left. + \varphi_{22}(m_l+2n-2)\,b_{2n-2}^{(l)} + \varphi_{42}(m_l+2n-4)\,b_{2n-4}^{(l)}\right]. \quad (6)$$

$$a_{2n}^{(l)} = -\frac{1}{f_{01}(m_l+2n)}\left[f_{21}(m_l+2n-2)\,a_{2n-2}^{(l)} + \varphi_{01}(m_l+2n)\,b_{2n}^{(l)}\right].$$

and

$$a_k = b_k = 0 \quad (k = -1, -2, \ldots) \quad b_2^{(2)} = b_0^{(4)} = b_0^{(6)} = 0,$$

$$f_{01}(\lambda) = \lambda^2 - \frac{\nu_2}{\nu_1}, \quad f_{21} = cK_1, \quad \varphi_{01}(\lambda) = \nu_2 c\lambda - \frac{\nu_2}{\nu_1}c,$$

$$f_{22}(\lambda) = \nu_2 B\lambda + \frac{\nu_2}{\nu_1}B, \quad \varphi_{02}(\lambda) = (\lambda-2)\lambda\left(\lambda-1-\sqrt{\frac{\nu_2}{\nu_1}}\right)\times \quad (7)$$

$$\times\left(\lambda-1+\sqrt{\frac{\nu_2}{\nu_1}}\right),$$

$$\varphi_{22}(\lambda) = \frac{\nu_2}{\nu_1}cB, \quad \varphi_{42}(\lambda) = -K_1 B.$$

Card 5/23

ACCESSION NR: AP4023363

Then, by setting $\nu_1 = \nu_2, \quad E_1 = E_2$ (8)

in equations (1) and (2), as solutions are obtained for the case of an isotropic conic shell. There are three non-logarithmic and three logarithmic solutions. The non-logarithmic solutions have the form:

$$u_i = x^{\rho_i} \sum_{s=0}^{\infty} a_s^{(i)} x^{2s}, \quad w_i = x^{\rho_i} \sum_{s=0}^{\infty} b_s^{(i)} x^{2s} \quad (i = 1, 2, 4). \tag{9}$$

Card 6/13

where the coefficients $a_{2n}^{(l)}$, $b_{2n}^{(l)}$ are determined from the recursion relations:

$$b_{2n}^{(l)} = -\frac{1}{(m_l+2n-2)^2(m_l+2n)^2}\{[vB(m_l+2n-2)+ + B]a_{2n-2}^{(l)} + cBb_{2n-2}^{(l)} - KBb_{2n-4}^{(l)}\}, \quad (10)$$

$$a_{2n}^{(l)} = -\frac{1}{[(m_l+2n)^2-1]}\{cKa_{2n-2}^{(l)} + [vc(m_l+2n)-c]b_{2n}^{(l)}\},$$

and $K_1 = K_2 = K$, $b_0^{(l)} = b_2^{(l)} = 0$.

The logarithmic solutions have the form:

$$u_l = \sum_{n=0}^{\infty} c_{2n}^{(l)} x^{2n+m_l} + \ln x \sum_{n=0}^{\infty} a_{2n}^{(l)} x^{2n+m_l},$$

$$w_l = \sum_{n=0}^{\infty} d_{2n}^{(l)} x^{2n+m_l} + \ln x \sum_{n=0}^{\infty} b_{2n}^{(l)} x^{2n+m_l}, \quad (11)$$

$(l = 3, 5, 6).$

where the coefficients $a_{2n}^{(l)}$, $b_{2n}^{(l)}$ are determined by formulas (10) with the following restrictions:

$$l = j, \quad b_1^{(l)} = 0, \quad a_0^{(l)} = b_0^{(l)} = b_2^{(l)} = 0.$$

and where the coefficients $c_{2n}^{(l)}$, $d_{2n}^{(l)}$: are given by

$$d_{2n}^{(l)} = -\frac{1}{(m_j+2n-2)^2(m_j+2n)^2}\{[vB(m_j+2n-2)+B]c_{2n-2}^{(l)} + cBd_{2n-2}^{(l)} - KBd_{2n-1}^{(l)} + vBa_{2n-2}^{(l)} + 4(m_j+2n)\times (m_j+2n-1)(m_j+2n-2)b_{2n}^{(l)}\}. \quad (12)$$

$$c_{2n}^{(l)} = -\frac{1}{[(m_j+2n)^2-1]}\{cKc_{2n-2}^{(l)} + [vc(m_j+2n)-c]d_{2n}^{(l)} + 2(m_j+2n)a_{2n}^{(l)} + vcb_{2n}^{(l)}\}.$$

with the restrictions $d_0^{(l)} = d_2^{(l)} = c_2^{(l)} = 0$.

ACCESSION NR: AP4023363

When the tangential inertial force is disregarded and when a new function f given by the formulas

$$u = -\beta_1 z^{\alpha_1} \frac{df}{dz},$$

$$w = z^{\alpha_1+1} \frac{d^2f}{dz^2} + \beta_2 z^{\alpha_1} \frac{df}{dz} + \beta_3 z^{\alpha_1-1} f, \qquad (17)$$

where

$$\alpha_1 = \frac{1}{\nu_1} + 1, \quad \beta_1 = \nu_0 c, \quad \beta_2 = 1 + \frac{2}{\nu_1}, \quad \beta_3 = \frac{1}{\nu_1^2} - \frac{\nu_2}{\nu_1},$$

is introduced, then the system (1) reduces to the following ordinary differential equation:

Card 9/13

ACCESSION NR: AP4023363

$$\frac{d^4f}{dz^4} + A_1(z)\frac{d^3f}{dz^3} + B_1(z)\frac{d^2f}{dz^2} + C_1(z)\frac{df}{dz} + [D_0(z) + \lambda^4 D_1(z)]f + [E_0(z) + \lambda^4 E_1(z)]f = 0, \quad (18)$$

where

$$\lambda^4 = 12\frac{R_0^2}{h^2},$$

$$A_1(z) = \frac{a_1}{z} = \left(11 + \frac{6}{\nu_1}\right)\frac{1}{z}, \quad B_1(z) = \frac{a_2}{z^2} = \left(30 - \frac{2\nu_2}{\nu_1} + \frac{40}{\nu_1} + \frac{15}{\nu_1^2}\right)\frac{1}{z^2},$$

$$C_1(z) = \frac{a_3}{z^3} = \left(18 - \frac{6\nu_2}{\nu_1} + \frac{50}{\nu_1} - 8\frac{\nu_2}{\nu_1^2} + \frac{50}{\nu_1^2} + \frac{20}{\nu_1^3}\right)\frac{1}{z^3},$$

$$D_1(z) = \frac{b_1}{z^2} - d_1 = e^2\left(\frac{\nu_2}{\nu_1} - \nu_1^2\right)\frac{1}{z^2} - \frac{\rho^2\omega(1-\nu_1\nu_2)R_0^2}{E_0},$$

$$D_0(z) = \frac{a_2}{z^2} = \left[-\frac{\nu_2}{\nu_1} + \left(\frac{\nu_2}{\nu_1}\right)^2 + \frac{4}{\nu_1} -\right.$$

Card 10/13

$$-\frac{6v_2}{v_1^3}+\frac{15}{v_1^4}-12\frac{v_2}{v_1^5}+\frac{20}{v_1^6}+\frac{15}{v_1^7}\Big]\frac{1}{z^8}. \qquad (10)$$

$$E_1(z)=\frac{b_2}{z^2}-\frac{d_1}{z}=\frac{12}{z^2}\left(\frac{v_2}{v_1}+\frac{2v_2}{v_1^2}-\frac{2v_2^2}{v_1}-v_2^2\right)-\left(1+\frac{2}{v_1}\right)\frac{d_1}{z},$$

$$E_2(z)=\frac{a_3}{z^3}=\left[\frac{v_2}{v_1}-\left(\frac{v_2}{v_1}\right)^2+\frac{2v_2^2}{v_1^3}-\frac{1}{v_1^3}+\frac{6v_2}{v_1^4}-\right.$$

$$\left.-\frac{8v_2}{v_1^4}-\frac{5}{v_1^4}+\frac{6}{v_1^5}\right]\frac{1}{z^3},$$

$$F_1(z)=\frac{b_2}{z^2}-\frac{d_2}{z^2}=\frac{12v_2}{v_1}\left(\frac{1}{v_1^2}-\frac{v_2}{v_1}\right)\frac{1}{z^4}-\left(\frac{1}{v_1^2}-\frac{v_2}{v_1}\right)\frac{d_1}{z^2},$$

Card 12/13

ACCESSION NR: AP4023363

$$F_3(s) = \frac{a_3}{s^3} = \left[\frac{2v_2}{v_1^3} - \frac{2v_2^2}{v_1^3} - \frac{5v_2}{v_1^3} + \frac{v_2^2}{v_1^4} - \frac{2}{v_1^3} + \right.$$
$$\left. + \frac{6v_2}{v_1^4} + \frac{5}{v_1^4} - \frac{2v_2}{v_1^5} - \frac{4}{v_1^5} + \frac{1}{v_1^4}\right] \frac{1}{s^4}.$$

An asymptotic solution of this equation is given for a high ratio of the minimal radius of curvature of the shell to its thickness.

A numerical example is considered which illustrates the method of applying the precise solutions. The calculations were performed on a digital computer.

Finally, the results of the precise calculation are compared with those obtained using the Bubnov-Galerkin method. Orig. art. has: 36 equations, 5 figures.

Card 12/13

ACCESSION NR: AP4023363

ASSOCIATION: Instytut Mekhaniky, AN UkrRSR (Institute of Mechanics, AN UkrRSR)

SUBMITTED: 11Jan64 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 001

Card 13/13

L 13830-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m) IJP(c) WW/EM

ACC NR: AP6001242 (A) SOURCE CODE: UR/0198/65/001/011/0012/0019

AUTHOR: Karnaukhov, V. G. (Kiev)

49

ORG: Institute of Mechanics, AN UkrSSR (Institut mekhaniki, AN UkrSSR)

TITLE: On nonaxially symmetric vibrations of conical shells

SOURCE: Prikladnaya mekhanika, v. 1, no. 11, 1965, 12-19

TOPIC TAGS: ~~shell~~, shell structure stability, shell vibration, conical shell structure, cylindrical shell structure, Fredholm integral, solid mechanical property

ABSTRACT: Free vibrations of a conical shell with a linearly varying thickness are studied. Ignoring inertial forces in the meridional direction, the author gives the following system of differential equations of free vibrations of an orthogonal conical shell with linearly varying thickness:

$$\frac{\partial}{\partial l}(l\sin\alpha N_l)+\frac{\partial S}{\partial\theta}=0;$$

$$\frac{\partial}{\partial l}(l\sin\alpha S)+\sin\alpha S+\frac{\partial N_\theta}{\partial\theta}+\frac{\operatorname{ctg}\alpha}{l}\cdot\frac{\partial M_\theta}{\partial\theta}-\frac{\gamma h}{g}\sin\alpha l\frac{\partial^2 v}{\partial t^2}=0;$$

$$-\cos\alpha N_\theta+\frac{\partial}{\partial\theta}\left(\frac{1}{l\sin\alpha}\cdot\frac{\partial M_\theta}{\partial\theta}\right)-\frac{\gamma h}{g}l\sin\alpha\frac{\partial^2 w}{\partial t^2}=0.$$

Additional descriptive equations are those for the continuity of deformation,

Card 1/3

$$\frac{\partial}{\partial l}(l\sin\alpha\varkappa_\theta)-\frac{\partial\varkappa_{l\theta}}{\partial\theta}=0;$$

$$\frac{\partial}{\partial l}(l\sin\alpha\varkappa_{l\theta})+\sin\alpha\varkappa_{l\theta}-\frac{\partial\varkappa_l}{\partial\theta}+\frac{\operatorname{ctg}\alpha}{l}\cdot\frac{\partial e_l}{\partial\theta}=0;$$

$$\cos\alpha\varkappa_l+\frac{\partial}{\partial\theta}\left(\frac{1}{l\sin\alpha}\cdot\frac{\partial e_l}{\partial\theta}\right)=0;$$

and the elasticity relationships for an orthogonal shell

$$e_l=\frac{1}{E_1h}N_l;\qquad e_\theta=-\frac{\nu_1}{E_1h}N_l;\qquad e_{l\theta}=\frac{1}{hG_{12}}S;$$

$$M_l=\frac{E_1h^2\nu_2}{12(1-\nu_1\nu_2)}\varkappa_\theta;\qquad M_\theta=\frac{E_2h^3}{12(1-\nu_1\nu_2)}\varkappa_\theta;\qquad M_{l\theta}=G_{12}\frac{h^3}{6}\varkappa_{l\theta}.$$

Here, h - shell thickness, E_1 and E_2 are the moduli of elasticity in the meridional and circumferential directions, ν_1 and ν are Poisson's coefficients, G_{12} is the shear modulus, w and v are the translations in the direction normal to the median surface and in the circumferential direction, α is the angle between the meridian of the median surface and the shell axis, l is the length of the median surface meridian, measured from the apex of the shell, θ is the angle between the meridian surface plane and the plane of the initial meridian, N_l and N_θ are normal forces, S is the shear force, M_l and M_θ are deflection moments, $M_{l\theta}$ is the torsional moment, ε_l, ε_θ, $\varepsilon_{l\theta}$,

L 13830-66
ACC NR: AP6001242

$\varkappa_\varphi$, $\varkappa_\theta$, $\varkappa_{\varphi\theta}$ are deformation components, and ρ is the material density. Solution of this system is arrived at on the basis of the distortion principle described by F. M. Mors and G. Feshbakh (Metody teoreticheskoy fiziki, t. 11, 1960). The distortion parameter used is one which relates the conical shell to a cylindrical shell of a given radius. A variational method is employed to describe forms and frequencies of vibration. Orig. art. has: 53 equations.

SUB CODE: 20/ SUBM DATE: 27Feb65/ ORIG REF: 006

Card 3/3

L 26759-66 FBD/EWT(1)/EWT(m)/EEC(k)-2/T/EWP(k)/EWA(h) IJP(c) WG/JD/JG

ACC NR: AP6012457 SOURCE CODE: UR/0181/66/008/004/1028/1034

AUTHOR: Kryukova, I. V.; Mirgalovskaya, M. S.; Karnaukhov, V. G.; Baranova, A. M.; Strel'nikova, I. A.

ORG: none

TITLE: Some features of coherent emission of gallium antimonide laser diodes

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1028-1034

TOPIC TAGS: gallium antimonide, laser emission, pn junction, laser, laser diode

ABSTRACT: This is a continuation of an earlier study of laser effects in diffusion GaSb p-n junctions (FTT v. 7, 342, 1965). The present study was made with drawn p-n junctions with the aim of determining in greater detail the features of their emission and to explain why diffusion p-n junctions have a lower efficiency than drawn junctions. The junctions were produced in a crystal grown by the Czochralski method. The p-n junction plane was perpendicular to the crystallographic (111) direction and the Fabry-Perot diode structure was produced by optical polishing. The diode dimensions were 0.4 x 0.5 x 0.5 mm. The measurements were made at 77K with the radiation produced both at large current densities (pulsed mode, pulse duration 1 μsec) and at low densities (dc). At low current densities the emission spectra of the investigated p-n junctions consisted of a single broad line with a maximum noticeably shifted toward the long wave length side compared with the width of the forbidden band of GaSb (0.80 ev). At larger currents, the radiation peak shifted toward the short wave length side

Card 1/2

L 26759-66

ACC NR: AP6012457 3

(0.76—0.78 ev), with a maximum half-width of the spectral line of 0.5×10^{-3} ev and threshold current densities of 3×10^{3}--1.2×10^{4} amp/cm^2. Although the results indicate conclusively that a laser action was produced in these junctions, the low resolution of the apparatus did not make it possible to observe the possible oscillation modes. Reduction of the temperature (to that of liquid helium) did not produce a noticeable change in the radiation parameters. Several arguments are advanced in favor of the hypothesis that states situated in the forbidden band participate in the stimulated transitions. The dependence of the shift of the radiation peak and of the width of the spectral line at different injection levels is analyzed and it is indicated that the reason why the previously investigated diffusion p-n junction had worse laser parameters is due to the lower degree of doping attained by the diffusion process and to a different character of the impurity distribution in the two types of junctions. There is also a difference in the recombination mechanism in the two junctions. The authors thank B. M. Vul for a discussion of the results and P. G. Yeliseyev and V. I. Shveykin for useful advice. Orig. art. has: 6 figures. [02]

SUB CODE: 20/ SUBM DATE: 07Aug65/ ORIG REF: 003/ OTH REF: 013/
ATD PRESS: 4258

Card 2/2 FV

L 38880-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) AT/JD/JG

ACC NR: AP6018569 SOURCE CODE: UR/0181/66/008/006/1942/1944

AUTHOR: Kryukova, I. V.; Paduchikh, L. I.; Karnaukhov, V. G. 76

ORG: none B

TITLE: Recombination radiation from gallium antimonide p-n junctions

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1942-1944

TOPIC TAGS: gallium compound, antimonide, pn junction, recombination radiation, optic transition, radiation spectrum, impurity level, conduction band

ABSTRACT: In view of the lack of unanimity on the nature of the lines observed in the recombination-radiation of gallium antimonide p-n junctions, the authors present additional data and propose a new scheme for the radiative transitions. The spectral composition of radiation was investigated as a function of the current density and the concentration of the doping impurity in the initial material. The samples used were n-type with electron densities from 8×10^{16} to 2.3×10^{18} cm^{-3}. The p-n junctions were produced by diffusion of zinc. In addition, alloyed p-n junctions were prepared from undoped p-type samples with hole density 1.5×10^{17} cm^{-3}. Radiation was applied in pulses at 77K. The radiation spectra of the diffusion junctions were strongly dependent on the degree of doping, exhibiting three intense lines at low densities and only one line at high densities. An increase in the current density shifts the line peak to lower energies. An interpretation of the spectrum is presented, wherein the short-wave peak is attributed to radiative recombination of the

Card 1/2

L 38880-66
ACC NR: AP6018569

injected carriers, and the long-wave peak is related to radiative transitions of the carriers from the conduction band at the impurity levels. The variation in the number of spectral lines with the impurity density is attributed to incomplete overlap of the levels of the zinc and the residual impurities. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 07Aug65/ OTH REF: 005

Card 2/2

ACC NR: AP6032413 SOURCE CODE: UR/0021/66/000/009/1135/1140

AUTHOR: Kovalenko, A. D. (Academician AN UkrSSR); Karnaukhov, V. H. -- Karnaukhov, V. G.

ORG: Institute of Mechanics, AN URSR (Institut mekhaniki AN URSR)

TITLE: Effect of cyclic loading on the temperature of a cylinder made of visco-elastic material

SOURCE: AN UkrRSR. Dopovidi, no. 9, 1966, 1135-1140

TOPIC TAGS: temperature distribution, cyclic load, viscoelastic cylinder

ABSTRACT: The authors investigated the steady-state and unsteady temperature distributions appearing in a long hollow visco-elastic cylinder during cyclic load with torque and normal force applied to its ends. Inertial force is not taken into account. The variational method is applied for the solution of the above-mentioned problems. It is found that with a certain critical value of the load parameter, depending on the thermal and mechanical properties of the material as well as on the cylinder geometry, a continuous temperature increase takes place. Orig. art. has: 4 figures and 24 formulas. [Authors' abstract]

Card 1/1 SUB CODE: 11, 13/SUBM DATE: 28Mar66/ORIG REF: 003/

KARNAUKHOV, V.K.

Development of the theory on neurogenic origin of bronchial asthma. Sovet. med. 17 no.3:30-32 Mar 1953. (CIML 24:2)

1. Of the First Therapeutic Clinic of Moscow Oblast Scientific-Research Clinical Institute imeni M. F. Vladimirskiy.

KARNAUKHOV, V. K.

Use of radioactive phosphorus in chronic leucoses. Sov. med. 20 no.4:42-45 Ap '56. (MLRA 9:8)

1. Iz I terapevticheskoy kliniki (nauchnyy rukovoditel' professor B. A. Chernogubov. Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M. F. Vladimirskogo (direktor kandidat meditsinskikh nauk P. M. Leonenko).

(LEUKEMIA, therapy,
radiophosphorus (Rus))
(PHOSPHORUS, radioactive,
ther. of leukemia (Rus))

KARNAUKHOV, V.K.

Nonspecific ulcerative colitis as one of the symptoms of rheumatic disease (rheumatoid arthiritis). Sov.med. 23 no.1:86-90 Ja '59. (MIRA 12:2)

1. Iz obshchey i gospital'noy terapevticheskoy kliniki (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M. Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(ARTHRITIS, RHEUMATOID, manifest.
ulcerative colitis, nonspecific as primary symt. (Rus))
(COLITIS, ULCERATIVE, compl.
nonspecific, as primary sympt. of ulcerative colitis (Rus))

KARNAUKHOV, V.K.

Clinical significance of uropepsin determination. Sov. med. 23 no.3: 79-84 Mr '59. (MIRA 12:4)

1. Iz obshchey i gospital'noy terapevticheskoy kliniki (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye. M. Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I. M. Sechenova i Gorodskoy klinicheskoy bol'nitsy No.24 (glavnyy vrach V.P. Uspenskiy).

(UROPEPSIN, determ.
diag. aspects (Rus))

KARNAUKHOV, V.K.

Clinical aspects and diagnosis of nonspecific ulcerative colitis. Sov. med. 24 no. 7:84-95 Jl '60. (MIRA 13:8)

1. Iz obshchey i gospital'noy terapevticheskoy kliniki (zav. - deystv. chlen AMN SSSR prof. Ye.M. Tareyev) I Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova i klinicheskogo sektora (zav.- prof. N.N. Plotnikov) i Instituta meditsinskoy parazitologii i tropicheskoy meditsiny im. Ye.I. Martsinovskogo (dir. - deystv. chlen AMN SSSR prof. P.G. Sergiyev).
(COLITIS)

KARNAUKHOV, V. K.

Cand Med Sci - (diss) "Clinical aspect and treatment of nonspecific ulcerative colitis." Moscow, 1961. 19 pp; (Second Moscow State Med Inst imeni N. I. Pirogov); 300 copies; price not given; (KL, 7-61 sup, 259)

KARNAUKHOV, Vladimir Kuz'mich; KALININA-ZOLOTAREVSKAYA, N.V., red.; VEL'CHIKOVA, Yu.S., tekhn. red.

[Nonspecific ulcerative colitis] Nespetsificheskii iazvennyi kolit. Moskva, Medgiz, 1963. 180 p. (MIRA 17:1)

PLOTNIKOV, N.N.; OZERETSKOVSKAYA, N.N.; KARNAUKHOV, V.K.; ZAL'NOVA, N.S.; FAYBUSOVICH, G.M.; KUKHTA, G.I.; ALEKSEYEVA, M.I.

Specific therapy of opisthorchosis in man by means of hexachloro-paraxylene; preliminary report. Med. paraz. i paraz. bol. 33 no.6: 676-681 N-D '64. (MIRA 18:6)

1. Klinicheskiy otdel Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Martsinovskogo Ministerstva zdravo-okhraneniya SSSR.

BURCHINSKIY, G.I., prof.; BEYUL, Ye.A., kand. med. nauk; VASILENKO, V.Kh., prof.; GUKASYAN, A.G., zasl. deyatel' nauki, prof.; KARNAUKHOV, V.K., kand. med. nauk; GUBERGRITS, A.Ya., prof.; LORIYE, I.F., prof.; MEN'SHIKOV, F.K., prof.; PLOTNIKOV, N.N., prof.; RABUKHINA, N.A., kand. med. nauk; RADBIL', O.S., prof.; RYSS, S.N., prof.; SAL'MAN, M.M., kand. med. nauk; SUKHININ, P.L., prof.; STEPANOV, P.N., prof.; FUNT, I.M., prof.; SHLAGUROV, A.A., prof.; TAREYEV, Ye.M., prof., otv. red.

[Multivolume manual on internal diseases] Mnogotomnoe rukovodstvo po vnutrennim bolezniam. Moskva, Meditsina. Vol.4. 1965. 667 p. (MIRA 18:1)

1. Deystvitel'nyy chlen AMN SSSR (for Tareyev, Vasilenko).
2. Chlen-korrespondent AMN SSSR (for Ryss).

FLOTNIKOV, M.N.; KARNAUKHOV, V.K.; ZAL'NOVA, N.S.; ALEKSEYEVA, M.I.; BORISOV, I.A.; STROMSKAYA, T.F.

Treatment of fascioliasis in man with chloxyle (hexachloroparazylene). Med. paraz. i paraz. bol. 34 no.6:725-729 N-D '65. (MIRA 18:12)

1. Klinicheskiy otdel Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo i otdel parazitologii sanitarno-epidemiologicheskoy stantsii Moskvy. Submitted June 16, 1965.

KRIVSHIN, Aleksandr Pavlovich, kand. tekhn. nauk; MIKHAYLOV, Aleksey Nikolayevich, inzh.; KARNAUKHOV, V.M., retsenzent; GANYUSHIN, A.I., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Repairing motor graders] Remont avtogreiderov. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog. RSFSR, 1961. 132 p. (MIRA 15:2)
(Graders (Earth-moving machinery))—Maintenance and repair)

KARNAUKHOV V.N.

ANOKHIN, V.I.; BOLTINSKIY, redaktor; KARNAUKHOV, V.N.; ROZANOV, V.G.; ITSKOV, A. [deceased], redaktor; KRYUKOV, V.L., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor.

[Tractors] Traktory. Pod red. V.N.Boltinskogo. Moskva, Gos. izd-vo selkhoz. lit-ry, 1954. 358 p. [Microfilm] (MLRA 7:11)
(Tractors)

L 09173-67 FSS-2/EWT(1) IJP(c)
ACC NR: AP7002301 SOURCE CODE: UR/0077/66/011/001/0018/0023

BUDANTSEV, A. Yu, KARNAUKHOV, V. N., Institute of Biological Physics, Academy of Sciences USSR, Pushchino on Oka (Institut biologicheskoy fiziki AN SSSR)

"Modification of the RFK-1M Motion Picture Camera for Single-Frame Photography"

Moscow, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, Vol 11, No 1, Jan-Feb 1966, pp 18-23

TOPIC TAGS: motion picture camera, photographic equipment, camera component

Abstract: The authors describe a time-lapse motion picture camera based on the RFK-1M unit. The alteration consists of two operations: 1) revision of the RFK-1M mechanism and 2) preparation of a programming unit. Schematic diagrams are given for the electrical and mechanical systems of the camera. The mechanical alteration of the device consists of modification of two cams. The revised unit may be used for time exposures: an electrical pulse or operation of the single-frame button opens the shutter which then remains fully open until a second electrical pulse is sent or the single-frame button is pushed a second time. The problems involved in manual time-lapse photography are eliminated by the programming device. This transistorized unit makes it possible to take time exposures from 0.5 sec to 3 min with an interval between frames of 5.5 sec to 33 min with an accuracy of ±0.5%. The device is battery operated and portable. Orig. art. has: 5 figures.

[JPRS: 35,431] TOPIC TAGS: motion picture camera, photographic equipment, camera component.

SUB CODE: 14 / SUBM DATE: 15Sep64 UDC: 778.534.82

Card 1/1 nst

0925 0572

L 41091-66 EWT(1)/FCC GW/GD

ACC NR: AT6027215 SOURCE CODE: UR/0000/66/000/000/0088/0090

AUTHOR: Prokopchuk, S. I.; Karnaukhov, V. P.

40
BTI

ORG: none

TITLE: A system for measuring radiowave attenuation and drifts in the ionosphere

SOURCE: AN SSSR. Sibirskoye otdeleniye. Sibirskiy institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Issledovaniya po geomagnetizmu i aeronomii (Studies in geomagnetism and aeronomy). Moscow, Izd-vo Nauka, 1966, 88-90

TOPIC TAGS: measuring apparatus, ionospheric radio wave, ionospheric sounder, IONOSPHERIC DRIFT

ABSTRACT: A system for measuring and recording the attenuation of radiowaves and the horizontal drift of small inhomogeneities in the ionosphere is briefly described. The system consists of a variable power output transmitter with a maximum pulse power of 20 kw, two modified R-250M receivers (with the AVC and ladder if filters removed) operating in conjunction with three antennas. One receiver is used for measuring the attenuation factor: it normally uses a three beam umbrella-type antenna. The other receiver measures the drifts and is normally tied to two inverted L antennas in a space diversity configuration. Any receiver may be connected to any antenna by virtue of an electronic commutator. The recording of drift or attenuation is done with the aid of 13L037 display tubes whose images and a special mask with time data are continuously filmed with the "Konvas" movie camera. During the registration of drifts

Card 1/2

L 41091-66
ACC NR: AT6027215

the x-sweep is automatically removed, and the reflected pulses are applied to the f-axis of the CRO. The additional system data is as follows: transmitted pulse duration, 100 μsec: pulse repetition frequency, 50 cps; receiver sensitivity, 3 μv; bandwidth, 17 kc; film transport speed when recording attenuation, 26.8 mm/sec and 160 mm/sec for drift. Orig. art. has: 1 figure. [BD]

SUB CODE: 04,14 / SUBM DATE: 25Dec65/ ORIG REF: 002/ ATD PRESS: 5057

Card 2/2 hs

ZEL'TSER, I.G.; KAMENEV, Yu.S.; SOBOLEV, S.K.; KARNAUKHOV, V.V.; SOROKIN, N.A.

Temperature measurement in a converter bath. Metallurg 10 no.6:22-23 Je '65. (MIRA 18:6)

1. Zavod im. Il'icha i Kiyevskiy institut avtomatiki.

KARNAUKHOV, V.V.; SOBOLEV, S.K., kand.tekhn.nauk; GUL'YEV, G.P.; KOZIN, G.N.; KRIVCHENKO, Yu.S.

Automation of the determination of the stopping moment of blowing in an oxygen-blown converte. Met.i gornorud. prom.no. 2: 26-28 Mr-Ap '64. (MIRA 17:9)

KARNAUKHOV, V.V.; SOBOLEV, S.K.

Controlling the carbon content in the oxygen-blown converter process.
Stal' 24 no.7:597-599 Jl '64. (MIRA 18:1)

KARNAUKHOV, V.V.; SOBOLEV, S.K.

Device for measuring the height of the flame above the converter. Priborostroenie no.9:31-32 S '64. (MIRA 17:11)

ANAN'YEV, V.A.; BARINSKIY, I.F.; TKACHEV, P.G.; KARNAUKHOV, Ye.F.; NAZARETYAN, Ye.L.

Evaluation of some diagnostic tests in Botkin's disease. Zhur. mikrobiol., epid. i immun. 33 no.3:36-39 Mr '62. (MIRA 15:2)

1. Iz Instituta virusologii AMN SSSR, kafedry infektsionnykh bolezney TSentral'nogo instituta usovershenstvovaniya vrachey Krasnosovetskoy infektsionnoy bol'nitsy.
(HEPATITIS, INFECTIOUS) (ERYTHROCYTES)

KARNAUKHOV, Ye.F.; BARINSKIY, I.F.; MEL'NIK, Ye.G.

Diagnostic importance of intracutaneous tests with autoserum in Botkin's disease. Vop.med.virus. no.9:90-94 '64.

(MIRA 18:4)

L 28526-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6013091 SOURCE CODE: UR/0048/66/030/004/0719/0721

AUTHOR: Parfianovich, I.A.; Pologrudov, V.V.; Karnaukhov, Ye.N. 46 B

ORG: Irkutsk State University (Irkutskiy gosudarstvennyy universitet)

TITLE: Effect of an electric field on the roentgenoluminescence of NaCl:Cu phosphor /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 719-721

TOPIC TAGS: luminescence, electric effect, sodium chloride, crystal phosphor, roentgenoluminescence, electric field, x ray irradiation

ABSTRACT: It is known that an electric field can affect the recombination luminescence of alkali halide phosphors; the electric field may either enhance or quench the luminescence, depending on the composition of the phosphor and the experimental conditions. In some cases, however, both of these effects may occur simultaneously. Such a dual effect, in particular, was observed by the authors in investigating the influence of an electric field on the luminescence of type I centers in NaCl:Cu. The specimens all were grown from a melt (1 mole % copper in the melt) and activated to different degrees by thermal diffusion. The specimens were prepared in the form of single crystal plates (0.18 mm thick) and were mounted between two electrodes: one the furnace rod with a platinum cap and the other a metal grid. The phosphor was excited through

Card 1/2

the grid electrode by x rays from a BSV2-Fe tube operated at 20 kV and 15 mA. At the same time there was applied to the crystal specimen a 50 cycle alternating field having a strength of about 10^5 V/cm. The luminescence was isolated by a UFS-1 ultraviolet filter and recorded by an FEU-18A photomultiplier coupled to a mirror galvanometer. The character of the effect of the electric field differs at different sections of the roentgenoluminescence time curve. Thus, for example, for the phosphor with 1 mole % copper during the first seconds of excitation the electric field quenches the luminescence, but with increase of the x-ray dose the quenching is reduced, and some 15-20 sec after the beginning of excitation the luminescence is enhanced at the instant of application of the field. Thus, the quenching and stimulating effects compete. Temperature studies showed that with increase of the temperature the quenching process increasingly dominates and beginning with about 75°C is the only effective one. The following inferences are drawn on the basis of the experimental results regarding the processes that may occur in the crystal incident to application of an electric field. The mechanism responsible for enhancement of the luminescence is release of electrons from shallow traps. With increase of the activator concentration the number of defects relative to the number of luminescence centers is reduced so that the stimulation by the electric field is diminished. Holes are released from the activator trapping levels and drop into the valence band. Migration of weakly bound activator ions also leads to decrease of the luminescence intensity. That such migration occurs follows from the high mobility of copper ions and the existence of a memory effect. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 002

Card 2/2 CC

KARNAUKHOV, Yu.I.

CA

7

A color reaction for bismuth ion. Yu. I. Karnaukhov, *Nauch. Raboty Studentov Voronezh. Gosudarst. Univ.* 1939, Pt. 1, 61-4; *Khim. Referat. Zhur.* 1939, No. 11, 61.—Acidify 0.2 cc. of a satd. NH_4CNS soln. and 0.4 cc. of a mixt. of ethyl ether with isoamyl alc. (1:1) and shake. As a result of the formation of $(NH_4)_3Bi(CNS)_6$ the lower layer is colored yellow and the upper layer is colored red or blue in the presence in the soln. of Fe^{+++} or Co^{++}, resp. If much Fe^{+++} and Co^{++} are present they are not extd. completely and, therefore, they darken the color of the lower layer. In such case, the upper layer is removed with a pipet and the aq. layer is again extd. with 0.4 cc. of the mixt. in which $(NH_4)_3Bi(CNS)_6$ is only slightly sol. The reaction permits detection of 1 part of Bi^{+++} in 100,000 parts of water. With an acidity of > 1 N and < 0.1 N the sensitivity of the reaction decreases considerably. Cu^{++} does not interfere with the reaction.

W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

KARNAUKHOV, Yu.I.

On V.K. Tkach and L.A. Frenkel's article "Study of the stability of protein structures during nonstationary heat exchange of their solutions in a high-frequency field." Biofizika 8 no.2: 269-270 '63. (MIRA 17:10)

KUZIN, A.M.; KARNAUKHOV, Yu.I.

Effect of ionizing radiations on the bioelectric potentials of plant seedlings. Biofizika 4 no. 6:714-719 '59. (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(ELECTROPHYSIOLOGY OF PLANTS) (PLANTS, EFFECT OF X RAYS ON)

KARNAUKHOV, Yu.I.

Mechanism of the biological fixation of molecular nitrogen.
Izv. AN SSSR. Ser. biol. no.5:714-730 S-O '65. (MIRA 18:9)

1. Institut biologicheskoy fiziki AN SSSR.

L 02416-67 EWT(d)/EWP(k)/EWP(h)/EWP(l)/EWP(v) JXT(CZ)
ACC NR: AT6014877 (N) SOURCE CODE: UR/2752/65/000/077/0025/0032

AUTHOR: Karnaukhov, Yu. S. 47 46

ORG: Central Scientific-Research Institute of the Merchant Marine (Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota) B+1

TITLE: Temperature control of scavenging air

SOURCE: Leningrad. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Trudy, no. 77, 1965. Avtomatizatsiya i vychislitel'naya tekhnika na morskom flote (Automation and computer engineering in the Merchant Marine), 25-32

TOPIC TAGS: engine cooling system, temperature control, air breathing engine, ATMOSPHERIC HUMIDITY

ABSTRACT: The possibility of controlling the temperature of scavenging air on the basis of relative humidity constant is discussed. On ships sailing in the tropics or the Arctic (when the relative humidity of the air reaches 80-100%) copious moisture condensation is observed during the considerable cooling of the scavenging air in the air coolers. Introduction of moisture into the engine cylinder in the form of droplets impairs the combustion process and increases fuel consumption. The author considers in detail the influence of the relative humidity upon the operational parameters of diesels: effective fuel consumption, compression pressure, maximum combustion pressure, maximum rate of pressure increase, temperature of exhaust gases, compression

Card 1/2 UDC: 621.43-443:621-533.65

Card 2/2 hs

L 43650-66 EWT(d)/EWT(m)/EWP(f)/T-2 TCH

ACC NR: AT6014876 SOURCE CODE: UR/2752/65/000/077/0022/0024

AUTHOR: Ignat'yeva, O. V.; Karnaukhov, Yu. S.; Fefilov, A. V. 61 B+1

ORG: none

TITLE: Modeling of the transient processes in an automatic system of temperature control of the cooling water of the 8DRN 43/61 engine

SOURCE: Leningrad. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Trudy, no. 77, 1965. Avtomatizatsiya i vychislitel'naya tekhnika na morskom flote (Automation and computer engineering in the Merchant Marine), 22-24

TOPIC TAGS: engine cooling system, automatic temperature control, transition flow, model theory, marine engineering, diesel engine / 8DRN 43-61 diesel engine

ABSTRACT: The article discusses the results obtained in modeling, on the MN-7 machine, the transient processes that occur in an automatic system of temperature control of the 8DRN 43/61 engine's cooling water for three different control schemes employed in marine transport vessels. Current work was occasioned by earlier interest in how such transient processes change in an actual engine. The constants of the equation describing the control system dynamics are determined from experimental curves for diesels (V. P. Petrov. *Inform. sb. TsNIIMF*, no. 116, 1964). In scheme 1, the control element is installed in the internal circuit of the cooling system and the

UDC: 62-501.72:621.436-71

Card 1/2

L 43650-66

ACC NR: AT6014876

sensing element at the engine input. In scheme 2, the control element is placed in the internal circuit of the cooling system and the sensor is placed at the engine water output. In scheme 3, the control element is placed in the circuit of the water input and control is exercised on the temperature at the engine output. The authors demonstrate that scheme 2 is the most rational choice on the basis of both static and dynamic indications. Orig. art. has: 1 figure.

SUB CODE: 21,12,13/ SUBM DATE: none/ ORIG REF: 001

Card 2/2

POLEZHAYEV, L.V.; KARNAUKHOVA, E.N.

Stimulation of the multiplication of nerve cells in the cerebral cortex of mammals. Dokl. AN SSSR 150 no.2:430-433 My '63. (MIRA 16:5)

1. Predstavleno akademikom K.I.Skryabinym.

(Cerebral cortex) (Nerves, Cranial)

KUZNETSOVA, Z.I., kand. tekhn. nauk; KARNAUKHOVA, E. Yu.

Water mixers and water taps; their technical and hydraulic characteristics. Sbor. trud. NIIST no.11:113-132 '62
(MIRA 18:1)

BELOKON', I.P. [Bilokin', I.P.]; GOLYNSKAYA, Ye.L. [Golyns'ka, IE.L.]; KARNAUKHOVA, L.A.; SIRENKO, L.A.

D.P.Protsenko; on his 60th birthday. Ukr.bot.zhur. 16 no.6: 101-103 '59. (MIRA 13:5)
(Protsenko, Dmitrii Filippovich, 1899-)

KARNAUKHOVA, L.A.

Structural characteristics of chloroplastids in the Siberian millet. Visnyk Kyiv. un. Ser. biol. no.1:65-71 '58. (MIRA 15:6)

(MILLET)
(CHROMATOPHORES)

KARNAUKHOVA, M.V.; BAKHMET'YEVA, A.G.

Good book on primary wool treatment ("Primary wool treatment" by N.A.Zausailov, N.M.Artemov. Reviewed by M.V.Karnaukhova, A.G.Bakhmet'eva). Tekst.prom. 19 no.10:91 O '59.
(MIRA 13:1)

1. Glavnyy inzhener Chernigovskoy fabriki pervichnoy obrabotki shersti (for Karnaukhova). 2. Sekretar' tekhnicheskogo soveta Chernigovskoy fabriki pervichnoy obrabotki shersti (for Bakhmet'yeva).
(Wool)

LITVINOV, N.I.; KARNAUKHOVA, N.G.

Species of rats inhabiting seagoing ships in the port of Vladivostok.
Izv. Irk.gos.protivochum. inst. 13:135-137 '54. (MIRA 10:12)
(VLADIVOSTOK--RATS) (SHIPS--DISINFECTION)

TATARINCVA, L.G.; BELIKOVA, N.P.; KARNAUKHOVA, N.G.

In scientific institutions of Vladivostok. Vop.virus. 4 no.4:511 Jl-Ag '59. (MIRA 12:12)
(MARITIME TERRITORY--TICKS AS CARRIERS OF DISEASES)
(ENCEPHALITIS)

KARNAUKHOVA, N.G.

Fleas on rodents in Vladivostok. Izv.Irk.gos.nauch.-issl. protivochum.inst. 17:135-138 '58. (MIRA 13:7)
(VLADIVOSTOK--FLEAS) (PARASITES--RODENTS)

KARNAUKHOVA, N.G.

Comparative fertility of the gray and black rat in the southern part of the Maritime Territory. Izv. Irk. gos. nauch.-issl. protivochum. inst. 21:305-313 '59. (MIRA 14:1)
(MARITIME TERRITORY--RATS)

KARNAUKHOVA, N. M.

USSR/Physics - Spark Machining 1 Aug 52

"Determining the Coefficients of Cathode Atomization of Metals by Ions of the Same Metals," L. N. Dobretsov, N. M. Karnaukhova

"Dok Ak Nauk SSSR" Vol 85, No 4, pp 745-748

States that phenomenon of cathode atomization can be divided into 2 stages: (1) elemental act of interaction of ion with the lattice of the target (excitation of the target); (2) succeeding processes leading to rupture of the atoms of the substance from the lattice (properly cathode atomization). Purpose of the

227T75

current work, the author states, was to obtain exptl data on cathode atomization of certain metals by ions of the same metals. Finds dependence of subject coeff upon energy of the ions. Submitted by Acad P.I. Lukirskiy 3 Jun 52.

227T75

KARNAUKHOVA, N.M.

7696. **Determination of the coefficients of cathode disintegration of metals by ions of the same metals.** L. N. DOBRETSOV AND N. M. KARNAUKHOVA. *Dokl. Akad. Nauk SSSR*, 85, ~~No. 4, 754-5 (1952)~~ In *Russian.*

The coeffs. for pure Cu, Mn, Fe, Pb and Sn were calculated from measurements of the amount of material removed from the target, p, using the formula $N = 2{\cdot}28 \times 10^4 (p/q)_m/\mu$, where q = quantity of electricity in coulombs incident, in the form of ions of the same metal (from an arc with a heated cathode), on the target during the time that p g of metal is removed; μ = atomic weight of the metal. These give a linear plot against $\sqrt{}$(energy of bombarding ions), similar to that found by other authors and not in agreement with the thermal theory of cathode disintegration, which predicts a dependence of N on $\mu^{4/3}$ or even on μ.

R. C. MURRAY

SOV/109- -4-3-24/38

AUTHORS: Karnaukhova N.M., Upatov V.Ya.

TITLE: Experimental Investigation of the Formation of Charges at the Surface of a Dielectric Under the Influence of Electric Bombardment. Part II. (Eksperimental'noye issledovaniye obrazovaniya zaryadov na poverkhnosti dielektrika pod vliyaniyem elektronnoy bombardirovki. Ch. II)

PERIODICAL: Radiotekhnika i Elektronika, Vol 4, Nr 3, 1959, pp 521-526 (USSR)

ABSTRACT: The work described is a continuation of the project described in an earlier issue of the journal (Nr 2, 1959). The aim of the investigation was the study of the kinetics of the formation of an actual charge spot which is produced on the surface of a dielectric of an electron beam. The experimental equipment employed in the investigation is shown in Fig 1. The equipment comprised a mica target 1, having a thickness of $l = 30\mu$; this was situated at a distance of about 100μ from a fine grid 2, which was employed for measuring the distribution of the potential at the surface of the dielectric. The grid could be removed from the target by means of a polished plug 3 and a guide 4; this was done before

Card 1/4

Experimental Investigation of the Formation of Charges at the Surface of a Dielectric Under the Influence of Electron Bombardment. Part II.

producing a spot on the target. A layer of silver 5 deposited on the internal surface of the tube was used as a collector during the formation of the spot. The average distance between the target and the collector was about 3 cm. In order to prevent a direct transfer of the electrons on to the signal electrode 6, the target was situated inside a protective cylinder 7, which was earthed. An electron beam in the system was formed by means of a standard-type gun. The measurement of the potential distribution on the surface of the dielectric target was done by the method described in the earlier paper (Ref 4). Two cases of spot formation were investigated. In the first case the distance between the collector and the target was large in comparison with the dimensions of the spot. In the second case the distance was smaller than the diameter of the spot; here, the grid was used as the collector. The experimental results are shown in Figs 2,3,5,6,7,8 and 9. Fig 2 illustrates the potential profiles of a positive charge spot; Curve 1 corresponds to the formation of the spot

Experimental Investigation of the Formation of Charges at the Surface of a Dielectric Under the Influence of Electron Bombardment. Part II.

when the collector was not blackened, while Curve 2 was taken with a soot-coated collector. Fig 3 illustrates the dependence of the potential in the centre of a positive spot on the duration of the bombardment. Fig 5 illustrates the charging current corresponding to the potential profile shown in Fig 2, Curve 2. Fig 6 represents the dependence of the potential of a positive charge spot on the potential of the collector, the bombardment time being constant. The potential profile of a negative charge spot is illustrated in Fig 7. The curves of Fig 8 represent the dependence of the potential in the centre of a negative spot on the duration of the bombardment. Fig 9 shows the dependence of the potential in the centre of a positive spot on the duration of the bombardment in the presence of a fine grid. From the above experimental data, it is concluded that the kinetics of the formation of a small positive spot are different from that of a small negative spot. The difference is due to the fact that the potential of a

Experimental Investigation of the Formation of Charges at the Surface of a Dielectric Under the Influence of Electron Bombardment. Part II.

positive spot tends to the quasi-stable value (which is smaller than the collector potential), while the potential of a small negative spot tends to a value which is near to that of the collector potential. This is illustrated by Figs 3 and 8. The authors express their gratitude to Prof. N.L. Dobretsov for valuable advice and his interest in this work.

There are 9 figures and 4 references, 3 of which are Soviet and 1 French.

Card 4/4 The paper was read at the 8th All-Union Conference on Cathode Electronics on the 23rd October, 1957.

SUBMITTED: April 15, 1957

L 14388-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Pt-10/
ACCESSION NR: AP4046357 Pu-4 JD/WW/JW/ S/0057/64/034/010/1906/1910
JG

AUTHOR: Karnaukhova, N. M.

TITLE: Determination of the vaporization rate of ZrC

SOURCE: Zhrunal tekhnicheskoy fiziki, v. 34, no. 10, 1964, 1906-1910

TOPIC TAGS: zirconium carbide, emission cathode, zirconium carbide vaporization, vaporization rate measurement, activation analysis

ABSTRACT: A method for determining the low vaporization rate of small quantities of a substance has been developed and applied to ZrC in the 2300—2500K range; low vaporization rate is one of the requirements for materials to be used in high-temperature emission cathodes. The method consists in collecting vaporization products on a thin polystyrene film deposited on a thin steel plate, and then determining the quantity of the collected product by radioactivation analysis. The method of collecting and the high-vacuum apparatus used are described in detail. A forvacuum pump and TsVL-100S metallic diffusion pump were used to achieve a vacuum of 10^{-6} mm Hg. The polystyrene film with ZrC deposit was detached from the steel plate and irradiated with

Card 1/2

L 62561-65 EWT(d),T Pg-4/Ph-4 LIP(c)
ACCESSION NR: AT5012387 UR/3134/64/000/011/0095/0100

AUTHOR: Petrova, L. [illegible]; Karnaukhova, N. N.

TITLE: Concerning one algorithm of finding the critical path of a network graph

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut matematiki. Vychislitel'nyye sistemy, no. 11, 1964, 95-100

TOPIC TAGS: network graph, oriented graph, critical path, computer algorithm, operations research

ABSTRACT: The following critical-path problem is formulated: Given an oriented graph without contours, containing M vertices and N arcs. Each arc u_{ij}, leading from the vertex i to the vertex j, is set in unique correspondence with a number $t_{ij} \leq 0$, called the length of the arc. A path is defined as a sequence of arcs in which the end of each arc coincides with the start of the succeeding one. The path length is defined as the sum of the lengths of all the arcs belonging to a given path. A graph of this kind is called a network graph. It is required to find for a given network graph a path (or a set of paths) with maximum length (critical path) and to determine its length. Although this can be reduced to a linear programming problem and can be solved by other means, the authors propose special algorithms which take into account several specific features of this problem. Since

Card 1/2

L 62561-65
ACCESSION NR: AT5012387

such problems usually involve graphs with thousands of vertices, the algorithm is aimed at facilitating computations by means of a computer. The realization of the argument with the aid of a three-address computer is briefly described. Orig. art. has: 2 figures and 13 formulas.

ASSOCIATION: Institut matematiki SO AN SSSR (Institute of Mathematics SO AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: DP

NR REF SOV: 002 OTHER: 000

Card 2/2

KARNAUKHOVA, R. A., Candidate Med Sci (diss) -- "The use of the tissue preparations proposed by Academician V. P. Filatov to treat chronic gonorrhea in women". Odessa, 1959. 14 pp (Odessa State Med Inst im N. I. Pirogov). 200 copies (KL, No 24, 1959, 150)

STROGONOV, B.P.; SHEVYAKOVA, N.I.; KARNAUKHOVA, T.B.

Formation of dark-colored substances in plants poisoned by salts. Dokl. AN SSSR 143 no.4:984-986 Ap '62. (MIRA 15:3)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR. Predstavleno akademikom A.L.Kursanovym.
(Plants, Effect of salts on) (Melanoidins)

KARNAUKHOVA, V. D.

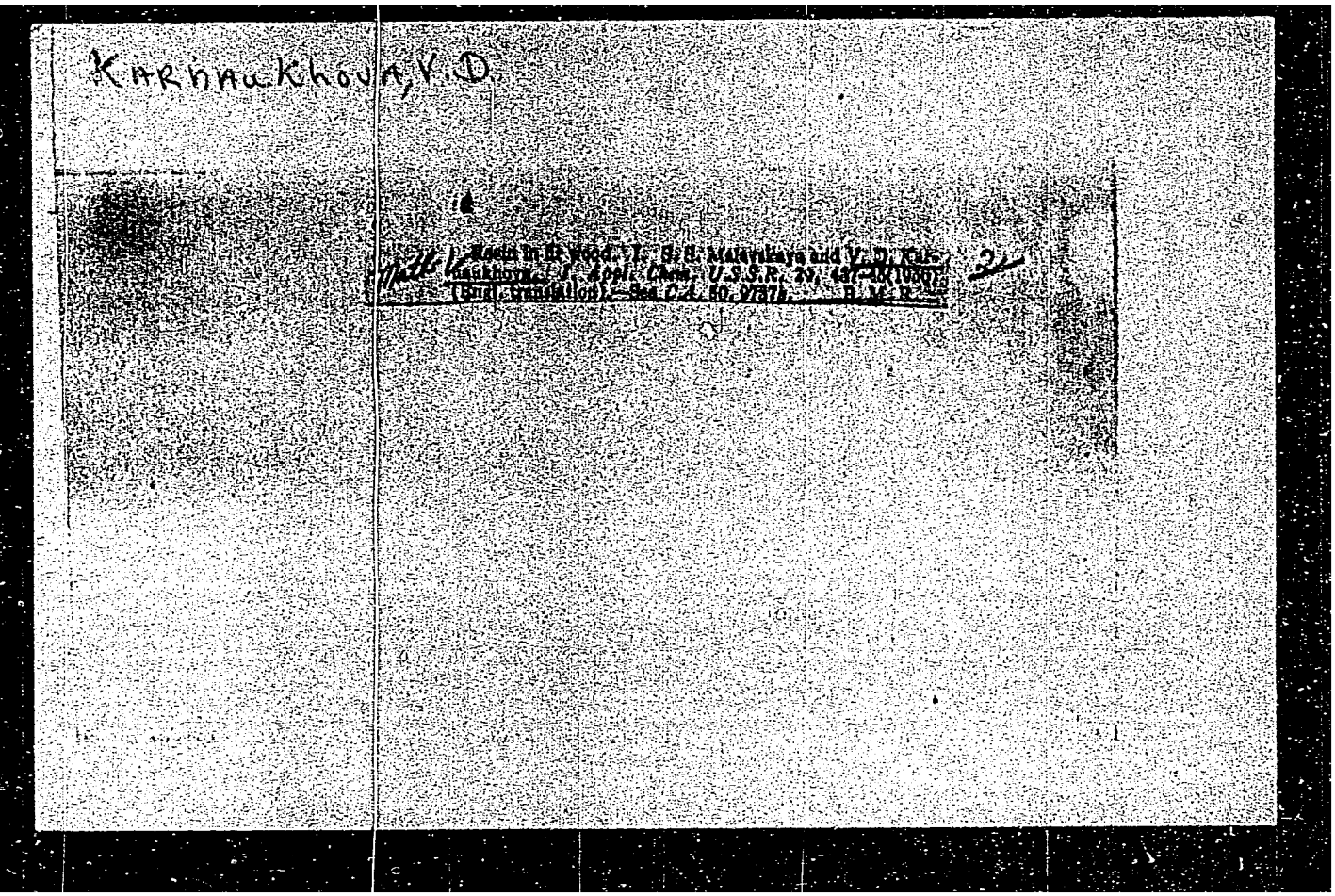
✓ The influence of log storage on the properties of spruce pitch. S. S. Malevskaya, V. D. Karnaukhova, and S. D. Kharad. *Bumazh. Prom.* 30, No. 9, 14–15(1955).—Two types of spruce were studied: freshly cut (I) and stored (II) in the open from April to Sept. Sawdust from I was extd. with various solvents and the exts. were sepd. into acid and neutral components, which were further fractionated by standard methods with the following results (all values given are percentage of bone-dry wood.): (*a*) total extractives, (*b*) total, (*c*) resin, and (*d*) fatty acids, (*e*) total neutral, (*f*) unsaponifiable, and (*g*) saponifiable fractions: for the Et_2O ext. from I 2.03, 1.04, 0.80, 0.23, 0.99, 0.40, and 0.50; from II 1.57, 0.85, 0.61, 0.21, 0.69, 0.34, and 0.34; for the petr. ether ext. from I 1.70, 0.74, 0.48, 0.24, 0.95, 0.38, and 0.56; from II 0.81, 0.34, 0.23, 0.10, 0.47, 0.24, and 0.21; for the $(CH_2Cl)_2$ ext. from I 2.14, 0.95, 0.62, 0.31, 1.19, 0.31, and 0.75; from II 1.03, 0.79, 0.45, 0.29, 0.84, 0.26, and 0.56; for the Me_2CO ext. from I 2.57, 1.56, 1.33, 0.23, 1.01, 0.39, and 0.45; and from II 2.46, 1.41, 1.01, 0.40, 1.05, 0.41, and 0.60. In a study of the relation between pitch trouble and type of extractive, unbleached sulfite pulp was extd. with Et_2O and then with Me_2CO, the extd. pulp (1 g.) was impregnated with 5 cc. of an Et_2O soln. of extractives from I or II by various solvents, and the Et_2O evapd. overnight; a part of these pulps was ball-milled to 60° S. R., and the amt. of pitch picked up by the balls and mills detd.; another part of the treated pulps (30 g.) was stirred at 700 r.p.m. in 3 l. distd. H_2O and the amt. of pitch picked up by the stirrer and vessel walls detd. The amt. of extractives present in the treated pulps, the amt. of pitch picked up during ball-milling and during stirring were: for the petr. ether ext. from I 1.32, 0.33, and 0.15, and from II 1.62, 0.21, and 0.053; for the Et_2O ext. from I 1.68, 0.32, and 0.11, and from II 1.54, 0.21, and 0.053; for the $(CH_2Cl)_2$ ext. from I 1.51, 0.10, and 0.14, and from II 1.17, 0.088, and 0.011; and for the Me_2CO ext. from I 1.74, 0.09, and 0.14, and from II 2.13, 0.068, and 0.014. John Lake Keays

(2)

KARNAUKHOVA, V. P.

Rosin in fir wood. I. S. S. Malevskaya and V. D. Karnaukhova. Zhur. Prikład. Khim. 19, 401-10(1946).—Progressive extn. of fir sawdust with petr. ether, Et$_2$O, CH_2Cl_2, and Me$_2$CO was used for extn. of rosin matter, which was then sepd. into components. The latter solvents dissolve the oxidized acids which contain 3 O atoms, 1 of which is apparently connected to the double bond. The greatest amt. of unsatd. acids is found in the neutral matter and least in the alkali-sol. fraction. Oxidative studies indicate that the unsatd. acids are oleic, linoleic, and linolenic acids; stearic acid was found among the satd. acids. The unsaponifiables, sepd. chromatographically, contained lignoceryl alc., m. 75°, β-sitosterol, m. 134-6°, dihydrositosterol, m. 137°, and a sterol, m. 140°. G. M. K.

Chair Organic Chem, Wood Technol. Acad. im S. M. Kirov



KARNAUKHOVA, V.V.

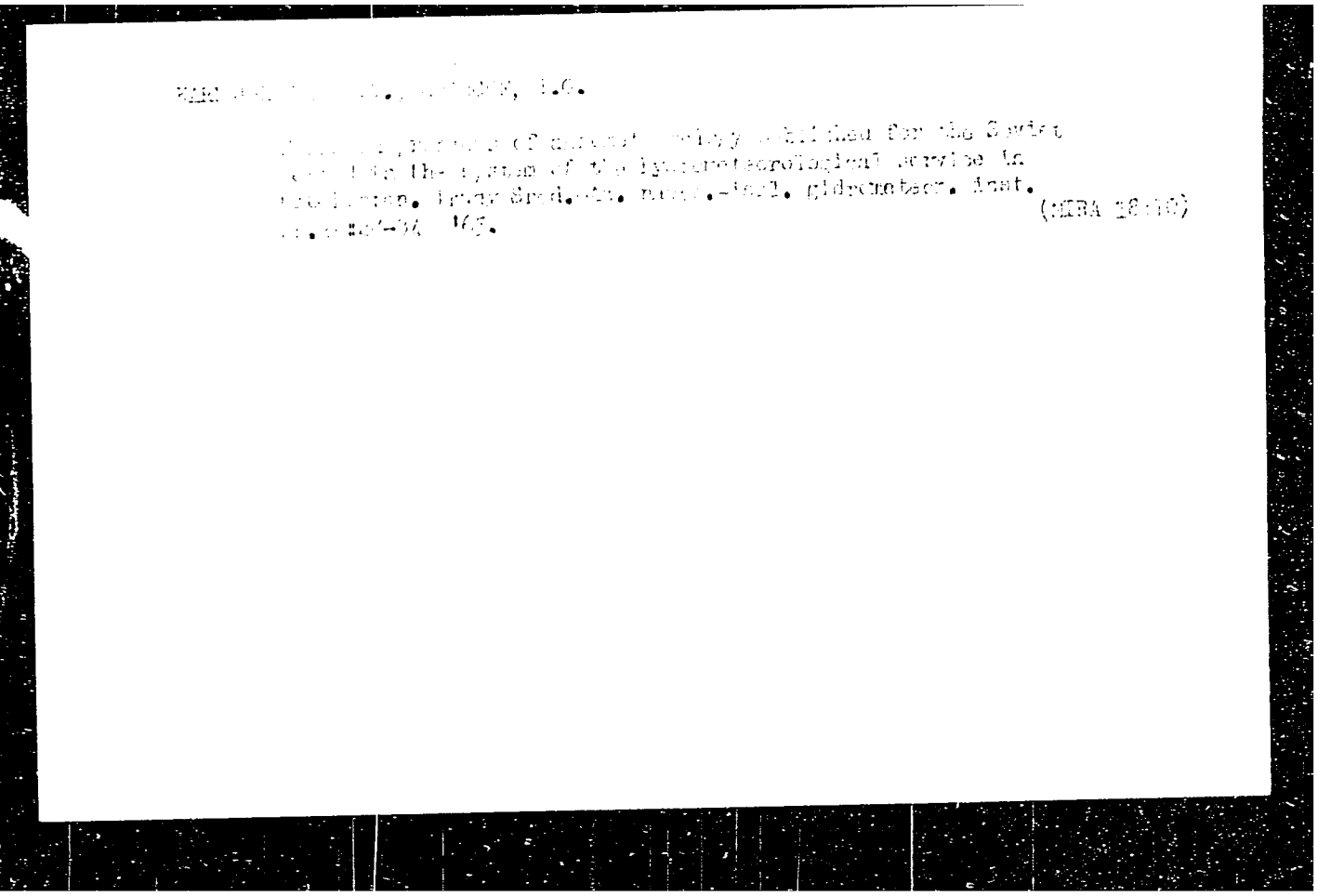
Methods for calculating the days [illegible] are suitable for tilling the soil in Uzbekistan. Trudy Sred.-Az. nauch.-issl. gidrometeor. inst. no.12:62-64 '62. (MIRA 16:5)

(Uzbekistan--Tillage)

KARNAUKHOVA, V.V.

Agricultural and meteorological conditions of carrying out autumnal, winter, and spring field work in Uzbekistan. Trudy Sred.-Az.nauch.issl.gidrometeor.inst. no.6:152-158 '61. (MIRA 14:4)

(Uzbekistan--Meteorology, Agricultural)



KARNAUKHOVA, V.V.

Quantitative expression of visual estimates of soil moisture. Meteor. i gidrol. no.10:47-48 O '62. (MIRA 15:9)

1. Sredneaziatskiy naucho-issledovatel'skiy gidrometeorologicheskiy institut.

(Soil moisture)

KARNAUKHOVA, Ye.

"Problems of develooment of the grain economy in the USSR," by Ye. Karnaukhova, Kommunist (monthly periodical), No. 17, Moscow, Nov 53, pp. 31-47.

KARNAUKHOVA, Ye.

Lenin's agrarian program in the first Russian revolution. Vop.ekon. no.4:48-62 Ap '56. (MLRA 9:8)
(Land tenure--History)

KARNAUKHOVA, Ye. I.

TERENT'YEV, M.L.; OSAD'KO, M.P.; BRAGINSKIY, B.I.; SLOBODIN, V.M.; FISHMAN, Z.A.; LEVIN, I.Ye.; TSYNKOV, M.Yu.; BADIR'YAN, G.G.; TYUTIN, V.A.; ABRAMOV, V.A.; FRAYER, S.V.; KOBCHIKOVA, I.A.; KARNAUKHOVA, Ye.I.; OBOLENSKIY, K.P.; IL'IN, S.A.; GAVRILOV, V.I.; FREYDMAN, S.M.; KALASHNIKOVA, V.S., redaktor; LAPIDUS, M.A., redaktor; NAKITINA, Ye.D., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor

[Manual for students of collective farm economy] V pomoshch' izuchaiushchim ekonomiku kolkhozov. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 423 p. (MLRA 10:1)
(Collective farms)

MOVSISYANTS, A.P. Prinimali uchastiye: BEGUCHEV, A.P.; IVANOV, A.D.; KARNAUKHOVA, Ye.I.; NIKOLAYEVSKAYA, O.N.; NOSKOV, B.G.; PUTILOV, A.K. AVARSKIY, A.I., red.; PEVZNER, V.I., tekhn.red.; TRUKHINA, O.N., tekhn.red.

[Brief manual on cattle raising] Kratkii spravochnik po krupnomu rogatomu skotu. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 327 p. (MIRA 13:12)

(Cattle)